



## The rise of biofuels in IR: the case of Brazilian foreign policy towards the EU

Cristian Lorenzo & Patricio Yamin Vazquez

To cite this article: Cristian Lorenzo & Patricio Yamin Vazquez (2016) The rise of biofuels in IR: the case of Brazilian foreign policy towards the EU , Third World Quarterly, 37:5, 902-916, DOI: [10.1080/01436597.2015.1113869](https://doi.org/10.1080/01436597.2015.1113869)

To link to this article: <http://dx.doi.org/10.1080/01436597.2015.1113869>



Published online: 07 Jan 2016.



Submit your article to this journal [↗](#)



Article views: 60



View related articles [↗](#)



View Crossmark data [↗](#)

## The rise of biofuels in IR: the case of Brazilian foreign policy towards the EU

Cristian Lorenzo<sup>a</sup> and Patricio Yamin Vazquez<sup>b</sup>

<sup>a</sup>Consejo Nacional de Investigaciones Científicas y Técnicas and Universidad Nacional de Tierra del Fuego, Ushuaia, Argentina; <sup>b</sup>Consejo Nacional de Investigaciones Científicas y Técnicas and Universidad de San Andrés, Buenos Aires, Argentina

### ABSTRACT

Biofuels are a growing alternative energy source. In a context of their growing global consumption, Brazil has shown particular interest in the European market. This paper analyses Brazilian foreign policy on biofuels towards the EU during Lula da Silva's administration (2003–10). It examines the emergence of biofuels at a global level, the main guidelines of Brazilian foreign policy, Brazilian environmental foreign policy and, finally, the Brazilian political response to changes in European law.

### ARTICLE HISTORY

Received 29 June 2015  
Accepted 26 October 2015

### KEYWORDS

Biofuels  
natural resources  
Latin America  
energy  
EU

### Introduction

Energy has become a key topic of research in both the natural and social sciences.<sup>1</sup> Where biofuels are concerned, there is no international regime, despite the growing relevance of the discussion on their impact on food prices and the environment.<sup>2</sup> This paper looks at the role of Brazil in the emergence of global biofuels, through a case study of its foreign policy towards the EU during 2003–10.

The selected period coincides with Lula da Silva's administration and it is particularly relevant for the study of this issue since it overlaps with the international emergence of biofuels as a partial alternative to non-renewable energies. 'Biofuels' means renewable fuels produced from biomass resources and, in the particular case of ethanol, from crops.<sup>3</sup> Several reasons justified our decision to inquire on this subject. First, Brazil is a BRICS member as one of the leading rising economies at international level. Second, energy is a strategic topic in the international arena. Indeed, the control of fossil fuels for consumption is nowadays one of the causes of war.<sup>4</sup> Third, renewable energy, such as biofuels, is an option for reducing the consumption of fossil fuels and, in consequence, reduces dependence on the latter. Specifically, and fourth, this paper also offers insights into Brazilian foreign policy on biofuels, revealing the importance of domestic and external factors in its explanation.<sup>5</sup> We argue that Brazil increased its room for manoeuvre as a global player as a consequence of

an international context that increasingly demanded ethanol, as well as of domestic factors that shaped its policies.

The first section presents an overall overview of the rise of biofuels globally. Next, a case study is addressed. In this regard, an outline will be presented of the different aspects involved: the international context, Brazilian foreign policy, its environmental policy at international level and connections between foreign policy and private actors. Finally, Brazilian foreign policy on biofuels towards the EU will be analysed through two events: the establishment of a general framework and Brazilian policy responses to changes in European biofuel laws.

## The rise of biofuels at global level

In recent years much scholarly attention has been concerned with the global emergence of biofuels. Different approaches have been developed to assess its effects. In this regard Ponte and Daugbjerg focused on the governance of biofuel sustainability.<sup>6</sup> They suggested that it is not enough to recognise the active role of state agencies and private actors in the global development of biofuels; instead they proposed going beyond this sharp division. For this reason they posit that the essential feature of biofuel governance is hybridity. Some authors have supported this idea, such as van Dam et al, who analysed the existence of 67 initiatives linked to certification of sustainable bioenergy production.<sup>7</sup> However, other authors have differentiated and considered separately the interests of private actors, on the one hand, and public actors, on the other. Bastos Lima and Gupta, for example, suggested that biofuels could not be considered a case of non-governance; instead they called them an example of 'mis-governance'.<sup>8</sup> From this point of view, they highlight that behind this phenomenon are actors whose private interest prevails, and explain why there is no an international biofuel regime.

This global process also was studied in Latin America. Janssen and Rutz examined some hotspots of sustainability conflicts in Latin America, such as the deforestation process in the Amazon forest, environmental and social impacts of sugarcane harvest and food–fuel conflicts. Regarding the future development of biofuels in the region, the authors warned of potential negative impacts.<sup>9</sup> In this regard, Salomon and Bailis highlighted that the development of biofuels posited special challenges for Latin American countries. Key dimensions of biofuel sustainability are: greenhouse gas (GHG) emissions, impacts on soil, water and air quality, energy security, and food security.<sup>10</sup> Taking a different approach, Stattman and Gupta specifically examined Brazilian foreign policy. They analysed global biofuel governance in Brazilian–European Union interactions through a case study on negotiations at the World Trade Organization.<sup>11</sup> They showed the importance of the role of nation-states in shaping the authority to govern biofuels in the international arena.

The literature provides additional insights for understanding the broader context. Harvey and Pilgrim considered energy (including biofuels) as one of the underlying drivers of the competition for land in the coming decades. The growing demand for food was also part of their framework.<sup>12</sup> In accordance with this perspective, Robertson et al noted that biofuels have many facets related to their sustainability dimensions.<sup>13</sup>

In addition, some general approaches on global environmental politics have contributed to understanding its international relations background. Andonova and Mitchell coined the concept of 'rescaling global environmental politics', meaning those changes produced in

that field at vertical and horizontal levels. In other words, this entails a growing density in the number of actors involved in its multi-scale nature, from local to global.<sup>14</sup> Biermann et al provide additional elements to the overview of international politics and the environment. They explored the global governance architecture and found that fragmentation was one of its main features.<sup>15</sup>

Building on these contributions, this paper will pay special attention to the Brazilian foreign policy in terms of its historical aspects both external and domestic. In this regard, the paper addresses Brazilian–European relations on biofuels from 2003 to 2010 as a case study.

## The case study

### *International context*

In order to analyse the case of Brazilian foreign policy towards the EU, it is necessary to characterise its international context. Biofuels began to be more visible in energy and environmental global issues. An active role of the state was necessary to boost the development of this sector and different strategies were necessary to develop it, such as mandatory blending targets, tax exemptions, subsidies, as well as import tariffs.<sup>16</sup> Global players in this sector are the USA, Germany, Brazil and Argentina in biodiesel production; and the USA, Brazil, China, Canada and France for ethanol production.<sup>17</sup>

Energy was a key driver that affected the emergence of first-generation biofuels. Ethanol started being competitive from 2004, when each barrel of oil cost more than US\$40.<sup>18</sup> This trend deepened in the following years. According to a 2013 British Petroleum report, a Brent oil barrel that cost \$28.83 in 2003 cost \$79.50 six years later.<sup>19</sup> In addition, the global reserve distributions are also a concern for some countries because of the challenge to their energy security. Oil is still mainly concentrated in some Middle Eastern countries such as Saudi Arabia, Iran, Iraq, Kuwait and the United Arab Emirates, as well as in other countries, such as Venezuela, in South America.<sup>20</sup> The main consumers, on the other hand, are the USA and China.<sup>21</sup> There is further evidence that shapes the future energy scene: oil will still be the dominant fuel in 2035.<sup>22</sup> Also, this increasing trend in world energy use implies global challenges for coming years. Global GHG emissions increased by 70% between 1970 and 2004. Forecasts are that GHG emissions will continue growing over the next few decades if climate change mitigation policies do not change.<sup>23</sup> Who pays the economic cost of facing climate change? This is still a big question. As Fernando Estenssoro Saavedra notes, the environmental crisis was not merely a physical matter: on the contrary, the political dimension is also one of its foundations.<sup>24</sup>

Two principal aspects of biofuel development are discussed: its impacts on food prices and its sustainability. In the context of a confluence of factors, the use of food for energy was one of the key drivers of rising food prices in 2006–08, which directly affected poor people's survival. In February 2007 the BBC reported that tens of thousands of people had marched to Mexico City in a protest against the soaring price of tortillas. In this context, the use of corn to make biofuels in the USA was widely criticised (BBC News, February 1, 2007). Moreover, high food prices affected multilateral relations. Critics of biofuels, such as the United Nations Special Rapporteur on the Right to Food, Jean Ziegler, called for a five-year moratorium on biofuel production, calling biofuels as 'a crime against humanity' (*Guardian*, April 5, 2008).

The production of bioenergy and food prices was also related to a controversial factor between the largest producers worldwide, the USA and Brazil. Ethanol production rose from 0.6 million cubic metres in 1975 to 18 million cubic meters in 2006–07.<sup>25</sup> During the High-level Conference on World Food Security held in 2008, the main objection to biofuel production was its influence on food prices. This proposition indirectly threatened Brazilian exports. In response, Brazil decided to highlight that its production was based on sugar cane as a raw material, whereas the USA used corn. Thus, Lula took a clear stand by critiquing US production and the use of corn for biofuels.<sup>26</sup>

Sustainability is a strong factor in bioenergy production. Studies have addressed different factors that increase biofuel production and, at the same time, preserve its sustainability. Do biofuels have a positive energy balance? This is debatable. According to its political consequences, it is possible to identify initiatives at multilateral level which focus on showing that biofuel production can be socially and environmentally sustainable. In this regard Germany has promoted the diffusion of analytical tools to support sustainable public policy decisions on biofuel production through Bioenergy and Food Security Criteria and Indicators (BEFSCI) and the Bioenergy and Food Security (BEFS) Approach. In addition, new means of production are being considered in which sustainability and production are not controversial issues. In this regard, Gopalakrishnan indicates that marginal lands and degraded water resources can contribute to increase the sustainability of biomass feedstock.<sup>27</sup>

### ***Brazilian foreign policy: an overview***

One of the most prominent characteristics of Brazilian foreign policy has traditionally been the key role of the Ministry of Foreign Relations, Itamaraty. Its dominance of the policy-making process regarding external affairs has been essential for maintaining highly coherent behaviour, mainly focused on boosting industrial exports and domestic economic development, on the one hand, and an autonomous and high-profile political position in multilateral forums, on the other.<sup>28</sup>

However, Itamaraty's total dominance in foreign affairs has declined since the mid-1990s. According to Cason and Power, this was a consequence of two simultaneous but differentiated processes: 'the advent of presidentially led diplomacy', on the one hand; and the 'pluralization of actors', on the other.<sup>29</sup> 'Presidentialisation' refers to the growing importance of presidential diplomacy, which can be observed in the administrations of both Fernando Henrique Cardoso and of Lula da Silva. The personal engagement of the presidents was decisive in regional cooperation and integration processes: the case of Mercosur is clearly illustrative of the increasing relevance of presidentialisation since the 1990s.<sup>30</sup>

The pluralisation of actors is the result of an increasing number of actors influentially participating in foreign policy. In this regard, the process is twofold. Pluralisation can be observed both horizontally and vertically: while the former refers to the growing participation of other governmental agencies, particularly ministries, the latter points to the rising participation of civil society in foreign policy making.

Consequently Itamaraty has yielded to the growing participation of the president, of governmental agencies and of private actors. Where biofuels are concerned, Brazilian foreign policy is a clear example of these processes.<sup>31</sup> First, Lula da Silva transformed energy issues into an element of foreign policy and referred to them several times in the international arena. During his statement at the General Debate of the United Nations General

Assembly in 2009, President Lula asserted that 'Brazil's energy blend is one of the cleanest in the world' and he emphasised the country's intention of becoming 'a world power in green energy'.<sup>32</sup> Second, the growing influence of other agencies, such as the Ministries of Environment, and of Science and Technology, was essential to shift Brazil's international position in environmental negotiations. Lastly, the participation of private actors was also highly relevant: while civil society organisations were relatively successful in influencing the environmental agenda, especially in terms of forestry; the sugar cane industry lobbied in favour of exporting biofuels and linking them with the country's environmental position.<sup>33</sup>

### *Lula's foreign policy*

Lula da Silva took office as president of Brazil on 1 January 2003. Foreign policy was a key issue for the new president and its main guidelines were clearly revealed during the first months of his term: the president's message to Parliament in 2003 and Minister of Foreign Affairs Celso Amorim's inauguration speech are clear examples in this regard.<sup>34</sup> This paper does not analyse Brazilian foreign policy in detail. Instead, the objective is to have an overview of different axes and events in Brazilian foreign policy in the period under study. From a historical perspective the following descriptions imply a change in the main guidelines of a neoliberal era in the Brazilian foreign policy.<sup>35</sup>

South America undoubtedly remained the top priority for Lula's administration. Brazil was an active member of different integration processes in the region: the Common Market of the South (Mercosur), the Initiative for the Integration of the Regional Infrastructure of South America (IIRSA), the South American Community of Nations (CAN) and the South American Union of Nations (Unasur). In terms of bilateral relations, a strong relationship was built with Argentina.

During Lula's administration, Brazil moved closer to African countries that belonged to the Community of Portuguese speaking countries (CPLP). Cooperative actions were the principal feature of this relationship. Lula visited Africa more than a dozen times and Brazil attended the African Union Summit as a special guest. Apart from having special areas of cooperation, such as health and credit lines, it is important to note that both sides defined a common stance against farm subsidies.<sup>36</sup>

With respect to the USA, the historical political and economic partnership continued.<sup>37</sup> Based on this background, both countries signed a Memorandum of Understanding Between the US and Brazil to Advance Cooperation on Biofuels. The most important issues on which they agreed: (1) to develop the next generation of biofuels technology; (2) to offer studies and technical assistance to selected third countries – at the beginning such assistance was intended to start in Central America and the Caribbean, and then be applied to countries elsewhere; and (3) to expand the international biofuel marketplace. For this reason, the central matter in this bilateral relationship would be cooperation on the establishment of standards and codes.<sup>38</sup>

Furthermore, Brazil would assume an active role in multilateral forums, for example on issues such as the war in Iraq and Israeli–Palestinian negotiations, transnational crime, arms trafficking, money laundering, corruption and terrorism. In the case of the UN, in particular, it is important to point out that Brazil advocates reform of the Security Council; in addition Brazilian participation in US peace missions in Haiti revealed its intention to play an active role at international level.

Brazil is also a member of BRICS (comprising Brazil, Russia, India, China and South Africa) and IBSA (India, Brazil and South Africa). Both are power blocs composed of emerging economies, one established in 2007, the other in 2003. In terms of their composition, special attention should be paid to China as a global player representing half of the BRICS' countries GDP, as well as to its relevance as an international market for Brazilian exports.<sup>39</sup> Also, it is important to consider that in 2010, in the context of the economic crisis, BRICS and IBSA held a Summit in Brasilia as an example of Brazilian initiatives to support South–South cooperation.<sup>40</sup>

### *A change of vision: Brazilian climate policy*

Particularly during Lula's presidency, Brazil's diplomacy shifted towards a more internationalist position, aiming not only to accept commitments but also to assume a leading position in negotiations. Historically Brazilian political elites dealt with environmental issues through a sovereignty-based perspective and had strong opposition to the adoption of legally binding international commitments, especially in forestry and development-related issues. This vision was primarily based on two ideas: first, environmental protection could damage the prospects of economic development by increasing its costs; and second, national control of natural resources was essential to guarantee national security.<sup>41</sup> However, still defended by some domestic actors, Brazil's environmental foreign policy has experienced several changes since the early 1990s.<sup>42</sup> Climate change talks, probably the most relevant forum in global environmental politics, are a clear example here. The definitive change in the Brazilian foreign policy can be seen in the negotiations for the 15th Conference of the Parties in Copenhagen. First, the country took a leading role during the negotiations, positioning itself as a major representative of the BASIC countries (Brazil, South Africa, India and China). Second, Brazil adopted a voluntary commitment to reduce its emissions by 2020 by between 36.1% and 38.9% of the business-as-usual.<sup>43</sup> Aguilar and Bouzas highlighted the notable shift in the Brazilian elites' perception of climate change, from considering it a threat to development to seeing it as a major opportunity for international funding for sustainable development.<sup>44</sup>

Traditionally the Brazilian position at the United Nations Framework Convention on Climate Change (UNFCCC) was heavily concerned with three problems: responsibility for the emissions, funding for sustainable development and forestry issues.<sup>45</sup> In terms of the first, Brazilian diplomacy firmly defended the Common But Differentiated Responsibilities (CBDR) and 'polluter-pays' principles. Thus, commitments should be based on the historical contributions of each country to climate change, meaning that industrialised countries should take the lead and commit themselves to reducing their emissions of greenhouse gases. In addition, Brazil objected both to the adoption of voluntary emission reductions by the South and to double conditionality mechanisms. As an example of its position, in the course of the negotiations that led to the signature of the Kyoto Protocol, Brazilian diplomats attacked developed states who implied that 'if you don't deliver, we won't deliver', by replying that 'until you deliver, we don't discuss'.<sup>46</sup>

Likewise, forestry was extremely relevant in Brazil's international position. This is closely related to one of the country's structural features, since it owns the largest forest area in the world and deforestation is the main source of its greenhouse gas emissions. Until 2003 Brazil was against the inclusion of deforestation and degradation of forests issues in the climate negotiations, based on the argument of sovereignty over its natural resources and their



importance for development. This changed with Lula's presidency. As Fernanda Viana de Carvalho pointed out, Brazil has an important veto power in the forest issue, based on the fact that it has the largest forest area worldwide, which impeded any consensus in that respect.<sup>47</sup>

Moreover, domestic policy shifts are also part of the explanation. The increased relevance of the Ministry of Environment as a key player in climate politics was the cornerstone of the adoption of several policies towards a greener position for the country. For instance, the adoption in 2004 of the Action Plan for the Protection and Control of Deforestation in the Amazon was the first step towards greater control over the area. From that year until 2011 deforestation gradually started to be reduced. In spite of this slowdown tendency, half of all deforestation occurred in areas dominated by large properties (over 500 ha) and this process of agricultural frontier expansions was closely related to different actor groups.<sup>48</sup> In the framework of a complex interplay of drivers that cause the deforestation process,<sup>49</sup> its political dimension shows that significant challenges stills remain for Brazil's strategy for reducing carbon emissions. The third evidence that supports this assertion is that in 2007 the Inter-ministerial Committee on Climate Change presented the National Plan on Climate Change (NPCC) and the Brazilian Law on Climate Change was finally passed two years later.<sup>50</sup> Among other relevant goals, the NPCC pledged an 80% reduction in deforestation by 2020 and the elimination of the net loss of forest area by 2015, as the main action to tackle greenhouse gas emissions. Moreover, it proposed boosting renewable energies, mainly hydroelectric and biofuels.

Brazil's good performance in climate change and forestry allowed it to increase the international funding it received for sustainable development. A major example is the Amazon Fund, created in 2008 to manage donations and non-reimbursable investments to protect public forests, as well as supporting their sustainable economic use. The Amazon Fund had received more than \$792 million by August 2014 from three different donors: Norway (95.76% of the funds); Germany (3.58%); and Petrobras (0.66%).<sup>51</sup>

The increase in funds received for sustainable development was extremely important for the country as well. Brazil took the initiative and proposed the Clean Development Mechanism (CDM), allowing the possibility for developed countries that could not fulfil their commitments to pay a penalty to a fund, which would be used to finance emission mitigation projects in the developing world. Indeed, Brazil has been one of the most active countries within the CDM. According to the 2013 Annual Report, Brazil was the third host country in terms of amount of projects, with 4.26%, after China (50.59%) and India (19.60%).<sup>52</sup>

In summary, Brazil has changed its position on climate policy both in the internal and external domains from reluctance to adopt compromises to becoming an international leader. In general terms it could be asserted that Brazilian elites have progressively changed their vision from a highly sovereign-focused perspective to a more internationalist approach to the problem. Furthermore, evidence suggests that the government considered engaging in the international climate regime as a major opportunity for obtaining funding for development, instead of a potential cost. Both the performance of the country within the CDM and the experience of the Amazon Fund are supporting this approach to climate policy.

### **Public and private lobbying**

The understanding of Brazilian foreign policy on biofuels requires taking into account its relations with actors from the private sector. At the beginning of May 2009, the President



of the Union of Sugar Cane Industry Association (UNICA) was recognised in the Itamaraty Palace by the president for his contribution to the agribusiness sector in Brazil. This fact revealed the relevance of this organisation for the government. Private companies as well as business associations played a major role in lobbying to boost Brazil's ethanol exports. In this regard, two different approaches can be observed. On the one hand, we identify actions fostered directly by the Brazilian government. In June 2010 the Brazilian Trade and Investment Promotion Agency (Apex-Brazil), along with the National Confederation of Industry, inaugurated a representation office in Brussels, where most EU decisions are taken. Further, the Brazilian Ministry of Foreign Relations coordinated an international programme for promoting ethanol exports to Europe. For the Brazilian embassies in Europe, the articulation between the private sector and the government was strategic. On 30 March 2010 representatives from Itamaraty and members of the Brazilian consulates and embassies in 19 European countries held a meeting at the headquarters of UNICA, the most important organisation representing producers of ethanol, bio-electricity and sugar in Brazil and abroad.<sup>53</sup> It reinforced UNICA's strategy of lobbying in Europe through the establishment of an office.

On the other hand, strictly private lobbying actions have also taken place since 2007. In the case of UNICA, it has an international presence in two cities involved in global bio-fuel policies, namely Washington and Brussels.<sup>54</sup> These cities were fundamental for getting closer to key legal decision related to both these international markets. As an example, the existence of import tariffs for Brazilian ethanol in the USA was a problem for UNICA because it subsidised ethanol production from this country and reduced Brazilian exports. For this reason, UNICA supported the ending of this tariff.<sup>55</sup>

In summary, Brazil's ethanol lobbying capacity in external markets implied that both the public and the private sectors were closely connected, sharing the interest of increasing ethanol exports.

### *Toward a strategic partnership*

Brazil had established relations with the EU (then EEC) in the 1960s. Both countries signed a framework cooperation agreement in 1992. This bilateral relationship was also governed by the European–Mercosur framework cooperation agreement of 1995. In this framework changes in EU legislation were highly significant for this bilateral relationship. Directive 2003/30/EC of the European Parliament and the Council approved a progressive increase in the mixture of biodiesel and ethanol in fossil fuels. The proposed targets were 2% in 2005 and 5.75% in 2010.<sup>56</sup> In January 2007 a communication of the EU Commission endorsed the idea of having a 20% mandatory target from renewable sources, with at least 10% of them targeted at transport.<sup>57</sup> In this context of an increasing interest in biofuel imports, the EU tried to get closer to Mercosur. From the Brazilian perspective, a potential partnership with the EU would encourage its bilateral relations with European countries, mainly Germany, France, the UK, Spain and Italy. But at the same time this strategy could have political costs for Brazil. For this reason, a Brazilian diplomat at the EU, André Correia de Lago, sought to neutralise the potential political effect of this declaration in South America. He differentiated between negotiations for a trade agreement, on the one hand, and a strategic partnership in order to avoid the fracture of Mercosur as a bloc in the negotiations process with the EU, on the other. In addition, he highlighted the importance of the latter and the complementarity of both processes (Radio Francia Internacional, May 30, 2007). A month later the European

Commission asked the Parliament and the Council to establish a strategic association with Brazil.<sup>58</sup>

Finally, the EU–Brazil Summit was held in Lisbon on 4 July 2007. The two sides agreed to coordinate their stance on global issues: democracy, energy security, climate change, human rights, peace, poverty and exclusion were some of these. Economic issues were also included. They agreed to support the liberalisation of trade and investment. Latin American–European processes were also involved. One of the issues included was precisely the conclusion of the Mercosur–European Association Agreement. From the Brazilian perspective, the European support for including reform of the main United Nations bodies was strategic.<sup>59</sup> This partnership, which includes environmental and renewable energy issues, reveals the Brazilian strategy to develop a biofuel marketplace at the international level, as well as active diplomacy to support these initiatives as a global player. Since then, Brazil and the European Union have been holding annual summits at the highest political level, as well as negotiations in 30 sectorial dialogues in the framework of the Joint Action Plan (2012–14), one of which is related to environment and energy issues.

### *Changes in European law*

Changes in the European legislation affected Brazilian foreign policy. Two instances clearly showed this and required rapid responses. In 2007 the European Commission organised an international conference on biofuels in Brussels. During the debate its president criticised the environmental impacts of biofuel production and proposed to develop a second generation of biofuels.<sup>60</sup> To do this, the European Commissioner for the Environment sought to add an extra condition: imported biofuels must be socially and environmentally sustainable. For that reason, they considered the need to introduce a certification scheme for biofuel production.<sup>61</sup> Clearly, this could have been a barrier to Brazilian exports. As a response to this change in the EU legislation, Brazil offered its own developed schema to convince potential importers, while its discourses emphasised that Amazonia was not involved in biofuel production from sugarcane.<sup>62</sup> As a result, Brazil and the EU created a permanent consultation forum on energy.<sup>63</sup>

Two years later a new and relevant change occurred in Europe. During April 2009 the release of EU Directive 2009/28/CE stated that: (1) by 2020, the consumption of renewable energies in Europe should be 20% of EU energy and 10% of this reduction would be in the transportation sector, in particular; (2) the reduction of greenhouse gas emissions (GEI) in the EU should be increased gradually; 35% in 2020; 50% in 2017 and 60% in 2018; and (3) biofuels produced from raw materials with a high level of biodiversity should be forbidden.<sup>64</sup> There was no consensus on the definition of measures on the indirect impact on land use in the calculation to reduce greenhouse gas emissions. Countries like the UK, Germany, Denmark and The Netherlands pushed for its inclusion. In contrast, France, Spain and Poland objected, since they considered that there was no scientific evidence on how to measure it properly. Brazil agreed with the latter.

In summary, the most important point here was that Brazil, as a one of the major players in biofuels had the capacity to tackle situations that generated vulnerability for it. In the first place, its answer was technically based; second, Brazil tried to influence matters as a global player. For such reasons, the political dimension was closely tied to technical matters. As a

result, a new question arises that we will address in the following section: what was Brazil's lobbying capacity in the international biofuels markets?

## Conclusions

This paper has looked at the role of Brazil in the global emergence of biofuels, through a case study of its foreign policy towards the EU during 2003–10. At an empirical level, long-term factors persist in the current global energy matrix, despite a changing environment. The ongoing dependence on non-renewable sources of energy, the volatility of the oil price and the geopolitical relevance of energy are still important. They involve a set of contextual features that, though not altering the structure of the global energy matrix, have shaped a favourable international context for Brazilian ethanol exports. In this regard, renewable energy sources have been boosted not only by geopolitical concerns but also by a rising environmental awareness of climate change.

Brazil's leadership as a world ethanol producer is related not only to its resources and background in this issue. Dependence on non-renewable energy and the volatility of oil prices were long-time drivers favouring Brazil's exports, as well as the emergence of bioenergy as a potential oil replacement. This situation reinforced the main features of Brazilian foreign policy and its general approach to environmental issues oriented towards making Brazil a global player. Within this framework, biofuels were part of the EU partnership. European environmental restrictions showed that Brazil had the capacity to answer new challenges, as well as to make political decisions on fostering the articulation between public and private actors. In summary, this study has revealed that Brazil increased its room for manoeuvre as a global player as a consequence of an international context that increasingly demanded biofuels, as well as of a result of relevant domestic factors that shaped its policies.

At an analytical level this article has shown the importance of state actors and a global scenario on biofuel issues in a fragmented architecture of global governance.<sup>65</sup> Furthermore, it has highlighted the importance of linking foreign policies with private interests in order to have a comprehensive approach. The article also suggests that there is a complex and interconnected process in which domestic and international factors intertwine in order to explain the mis-governance of biofuels in international politics.<sup>66</sup>

Further research should address new questions. Regarding the role of biofuels within global challenges, there is a need to explore Brazilian–US bilateral relations on biofuels as well as this energy alternative issue in Brazilian–EU relations from 2010 onwards.

## Funding

This work was supported by the Consejo Nacional de Investigaciones Científicas y Técnicas de Argentina.

## Notes on Contributors

**Cristian Lorenzo** has a PhD in International Relations. He is a Research Scientist at Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET) in the Centro Austral de Investigaciones Científicas (CADIC) and is also Research Professor in the Instituto de Ciencias Polares, Recursos Naturales & Ambiente, Universidad Nacional de Tierra del Fuego, Ushuaia.

He published articles like “Política forestal en Naciones Unidas. ¿importa la bioenergía?” *Revista Direitos Humanos e Democracia* (2015); “Orden interno y política exterior argentina: la cuestión de los biocombustibles” *Austral: Revista Brasileira de Estratégia e Relações Internacionais* (2015); “Bosques y Energía en la Organización de las Naciones Unidas. Sus proyecciones para Argentina” *Brazilian Journal of International Relations* (2014).

**Patricio Yamin Vázquez** has a Master’s in International Relations and is a Doctoral Fellow at CONICET and Universidad de San Andrés (UdeSA), Buenos Aires.

## Notes

1. Sovacool, “What are we Doing Here?”
2. Janssen and Rutz, “Sustainability of Biofuels.”
3. Bastos Lima and Gupta, “The Extraterritorial Dimensions of Biofuel Policies.”
4. Klare, *Rising Powers, Shrinking Planet*.
5. Amorin, “Brazilian Foreign Policy”; Cervo, “Brazil’s Rise on the International Scene”; Flandes and Saraiva, “Potências emergentes na ordem de redes”; Gomes Saraiva, “Brazil’s Strategies and Partnerships”; Reis da Silva, “The Matrix Changes”; and Soreanu Pecequilo, “A New Strategic Dialogue.”
6. Ponte and Daugbjerg, “Biofuel Sustainability.”
7. van Dam et al., “From the Global Efforts.”
8. Bastos Lima and Gupta, *The Policy Context of Biofuels*.
9. Janssen and Rutz, “Sustainability of Biofuels.”
10. Solomon and Bailis, “Introduction.”
11. Stattman and Gupta, “Negotiating Authority.”
12. Harvey and Pilgrim, “The New Competition for Land.”
13. Robertson et al., “Sustainable Biofuels Redux.”
14. Andonova and Mitchell, “The Rescaling of Global Environmental Politics.”
15. Biermann et al., “The Fragmentation of Global Governance Architecture.”
16. Sorda et al., “An Overview of Biofuel Policies.”
17. REN21, *Renewables 2014*.
18. Goldemberg, “The Brazilian Biofuels Industry.”
19. British Petroleum, *Statistical Review of World Energy*, 15.
20. British Petroleum, *Statistical Review of World Energy*, 6.
21. British Petroleum, *Statistical Review of World Energy*, 9.
22. International Energy Agency, *World Energy Outlook 2010*, 77.
23. Metz et al., “Mitigation of Climate Change.”
24. Estenssoro Saavedra, *Historia del debate ambiental en la política mundial*, 22.
25. Goldemberg et al., “The Sustainability of Ethanol Production.”
26. da Silva, “Statement at the FAO High-level Conference.”
27. Gopalakrishnan et al., “Biofuels, Land, and Water.”
28. Lafer, *La identidad internacional de Brasil*.
29. Cason and Power, “Presidentialization, Pluralization, and the Rollback of Itamaraty.”
30. On the importance of presidential diplomacy for Latin American multilateralism, see also Rojas Aravena, “Rol y evaluación de la diplomacia de cumbres”; and Legler and Santa-Cruz, “El patron contemporáneo.”
31. Carvalho, “A posição brasileira nas negociações internacionais.”
32. Da Silva, “Statement at the General Debate.”
33. Carvalho, “A posição brasileira nas negociações internacionais.”
34. Amorin, “Discurso proferido”; and da Silva, “Mensagem ao Congresso Nacional.”
35. Reis da Silva, “The Matrix Changes.”
36. Cervo, “Brazil’s Rise on the International Scene.”
37. Moniz Bandeira, *Presencia de Estados Unidos en Brasil*.

38. Government of Brazil, "Memorandum of Understanding."
39. Rosales, *China y América Latina y el Caribe*, 15.
40. Cervo, "Brazil's Rise on the International Scene," 28.
41. Do Couto e Silva, *Geopolítica del Brasil*; Hilton, "Las relaciones argentino-brasileña"; Kelly, *Temas tradicionales de la geopolítica brasileña*; and Travassos, *Proyección Continental del Brasil*.
42. Johnson, "Brazil."
43. UNFCCC, "Appendix II."
44. Aguilar and Bouzas, "La Argentina y Brasil."
45. Carvalho, "The Brazilian Position"; Friberg, "Varieties of Carbon Governance"; and Johnson, "Brazil."
46. "Highlights."
47. Carvalho, "The Brazilian Position."
48. Godar et al., "Actor-specific Contributions."
49. Verburg et al., "The Impact of Commodity Price and Conservation Policy Scenarios."
50. Comitê Interministerial Sobre Mudança do Clima, "Plano Nacional sobre Mudança do Clima."
51. Amazon Fund, "Donations."
52. UNFCCC, "Clean Development Mechanism."
53. União da Indústria de Cana-de-Açúcar, "Embaixadas brasileiras querem intensificar negocios."
54. In an interview with UNICA's Chief Representative in North America, Joel Velasco emphasised the influence of their international strategy as a Brazilian company in strategic places. 'UNICA's presence in Washington and Brussels puts the Brazilian sugarcane industry at the center of policy discussions. That has not only given our industry a voice but also a say in the development and implementation of policies for, or sometimes against, biofuels. Whereas before governments enacted biofuel policies based on the input of their local industries, since 2007 we have completely changed that approach with UNICA's international involvement. Whether it is the United States federal government, the state of California or the European Union and its member states, the key biofuel policy makers around the world know where UNICA stands.' União da Indústria de Cana-de-Açúcar, "Looking Back."
55. União da Indústria de Cana-de-Açúcar, "Unica defende fim da tarifa contra etanol."
56. European Union, "Directive 2003/30/EC."
57. European Union, "Presidency Conclusions."
58. European Union, "Towards an EU–Brazil Strategic Partnership."
59. European Union, "EU–Brazil Summit."
60. European Union, "José Manuel Barroso."
61. European Union, "Stavros Dimas."
62. International Centre for Trade and Sustainable Development, "Brasil y Unión Europea."
63. European Union, "The European Union deepens Energy Relations."
64. European Union, "Directive 2009/28/EC."
65. Stattman and Gupta, "Negotiating Authority"; and Biermann et al., "The Fragmentation of Global Governance Architecture."
66. Andonova and Mitchell, "The Rescaling of Global Environmental Politics"; and Bastos Lima and Gupta, *The Policy Context of Biofuels*.

## Bibliography

- Aguilar, Soledad, and Roberto Bouzas. "La Argentina y Brasil en negociaciones internacionales sobre cambio climático." *Boletín Informativo Techint*, no. 334 (2011): 69–83.
- Amazon Fund. "Donations." Brazilian Development Bank (BNDES), 2014. [www.amazonfund.gov.br/FundoAmazonia/fam/site\\_en/Esquerdo/doacoes/](http://www.amazonfund.gov.br/FundoAmazonia/fam/site_en/Esquerdo/doacoes/)
- Amorim, Celso. "Discurso proferido por ocasião da transmissão do cargo de Ministro de Estado das Relações Exteriores." Ministério de Relações Exteriores, January 1, 2003. <http://www.biblioteca.itamaraty.gov.br/novos-livros/2010-lingua-portuguesa/discursos-palestras-e-artigos-do-chanceler-celso-amorim-2003-2010>.

- Amorin, Celso. "Brazilian Foreign Policy under President Lula (2003–2010): An Overview." *Revista Brasileira de Política Internacional*, no. 52 (special issue) (2010): 214–240.
- Andonova, Lilianna, and Ronald Mitchell. "The Rescaling of Global Environmental Politics." *Annual Review of Environment and Resources* 35 (2010): 255–282.
- Bastos Lima, Mairon, and Joyeeta Gupta. "The Policy Context of Biofuels: A Case of Non-governance at the Global Level." *Global Environmental Politics* 13 (2013): 46–64.
- Bastos Lima, Mairon, and Joyeeta Gupta. "The Extraterritorial Dimensions of Biofuel Policies and the Politics of Scale: Live and Let Die?." *Third World Quarterly* 35 (2014): 392–410.
- Biermann, Frank, Philipp Pattberg, Harro van Asselt, and Fariborz Zelli. "The Fragmentation of Global Governance Architecture." *Global Environmental Politics* 9 (2009): 14–40.
- British Petroleum. *Statistical Review of World Energy*. Accessed June 25, 2015. [http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical\\_review\\_of\\_world\\_energy\\_2013.pdf](http://www.bp.com/content/dam/bp/pdf/statistical-review/statistical_review_of_world_energy_2013.pdf).
- Carvalho, Fernanda. "A posição Brasileira nas negociações internacionais sobre florestas e clima (1997–2010): do veto à proposição." PhD diss., University of Brasília, November 2010.
- Carvalho, Fernanda. "The Brazilian Position on Forests and Climate Change from 1997 to 2012: From Veto to Proposition." *Revista Brasileira de Política Internacional*, no. 55 (2012): 144–169. doi:10.1590/S0034-73292012000300009.
- Cason, Jeffrey, and Timothy Power. "Presidentialization, Pluralization, and the Rollback of Itamaraty: Explaining Change in Brazilian Foreign Policy Making in the Cardoso-Lula Era." *International Political Science Review* 30, no. 2 (2009): 117–140. doi:10.1177/0192512109102432.
- Cervo, Amado. "Brazil's Rise on the International Scene: Brazil and the World." *Revista Brasileira de Política Internacional*, no. 53 (2010): 7–32. doi:10.1590/S0034-73292010000300002.
- Comitê Interministerial sobre Mudança do Clima. "Plano Nacional sobre Mudança do Clima." Ministério do Meio Ambiente, 2008. [http://www.mma.gov.br/estruturas/169/\\_arquivos/169\\_29092008073244.pdf](http://www.mma.gov.br/estruturas/169/_arquivos/169_29092008073244.pdf).
- da Silva, Luiz Inácio Lula. "Mensagem ao Congresso Nacional: I: abertura da 1 Sessão Legislativa Ordinária da 52 Legislatura." Secretaria de Comunicação de Governo e Gestão Estratégica, February 17, 2003. <http://www2.planalto.gov.br/acompanhe-o-planalto/mensagem-ao-congresso/mensagem-ao-congresso-nacional-2013-2003>.
- da Silva, Luiz Inácio Lula. "Statement at the FAO High-level Conference on World Food Security: The Challenges of Climate Change and Bioenergy." Food and Agriculture Organization of the United Nations, Rome, June 3, 2008. [http://www.fao.org/fileadmin/user\\_upload/foodclimate/statements/brazil\\_lula.pdf](http://www.fao.org/fileadmin/user_upload/foodclimate/statements/brazil_lula.pdf).
- da Silva, Luiz Inácio Lula. "Statement at the General Debate of the 64th Session of the United Nations General Assembly." New York, September 23, 2009. [http://www.un.org/en/ga/64/generaldebate/pdf/BR\\_en.pdf](http://www.un.org/en/ga/64/generaldebate/pdf/BR_en.pdf).
- Do Couto e Silva, Golbery. *Geopolítica del Brasil*. Buenos Aires: El Cid Editor-Hilton, 1978.
- Estenssoro Saavedra, Fernando. *Historia del debate ambiental en la política mundial 1945–1992*. Santiago de Chile: Instituto de Estudios Avanzados de la Universidad de Santiago de Chile, 2014.
- European Union. "Directive 2003/30/EC of the European Parliament and of the Council of 8 May 2003 on the Promotion of the Use of Biofuels or Other Renewable Fuels for Transport." Brussels, May 8, 2003. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32003L0030>.
- European Union. "EU–Brazil Summit, Lisbon, 4 July 2007: Joint Statement." July 4, 2007. [http://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/er/95167.pdf](http://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/er/95167.pdf).
- European Union. "Presidency Conclusions." Brussels, May 2, 2007. [http://www.consilium.europa.eu/ueDocs/cms\\_Data/docs/pressData/en/ec/93135.pdf](http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec/93135.pdf).
- European Union. "Towards an EU–Brazil Strategic Partnership." Brussels, May 30, 2007. <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52007DC0281>.
- European Union. "José Manuel Barroso, President of the European Commission, Keynote Speech on Biofuels." Brussels, July 5 2007. [http://europa.eu/rapid/press-release\\_SPEECH-07-470\\_en.htm?locale=en](http://europa.eu/rapid/press-release_SPEECH-07-470_en.htm?locale=en).
- European Union. "Stavros Dimas, Member of the European Commission, responsible for the Environment: Credible and Serious Choices about Biofuels." Brussels, July 5, 2007. <http://europa.eu/rapid/pressReleasesAction.do?reference=SPEECH/07/473&format=HTML&aged=0&language=EN&guiLanguage=en#sthash.dXCwnDZt.dpuf>.



- European Union. "The European Union deepens Energy Relations with Brazil." Brussels, July 5, 2007. [http://europa.eu/rapid/press-release\\_IP-07-1025\\_en.htm?locale=en](http://europa.eu/rapid/press-release_IP-07-1025_en.htm?locale=en).
- European Union. "Directive 2009/28/EC of the European Parliament and of the Council of 23 April 2009 on the Promotion of the Use of Energy from Renewable Sources and Amending and Subsequently repealing Directives 2001/77/EC and 2003/30/EC." Brussels, April 23, 2009. <http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:32009L0028>.
- Flemes, Daniel, and Miriam Saraiva. "Potências emergentes na ordem de redes: o caso do Brasil." *Revista Brasileira de Política Internacional* 57, no. 2 (2014): 214–232. doi:10.1590/0034-7329201400312.
- Friberg, Lars. "Varieties of Carbon Governance: The Clean Development Mechanism in Brazil – A Success Story Challenged." *Journal of Environment & Development* 18, no. 4 (2009): 395–424. doi:10.1177/1070496509347092.
- Goldemberg, José. "The Brazilian Biofuels Industry." *Biotechnology for Biofuels* 1, no. 6 (2008): 1–7. doi:10.1186/1754-6834-1-6.
- Goldemberg, José, Suani Teixeira Coelho, and Patricia Guardabassi. "The Sustainability of Ethanol Production from Sugarcane." *Energy Policy* 36, no. 6 (2008): 2086–2097. doi:10.1016/j.enpol.2008.02.028.
- Gopalakrishnan, Gayathri, M. Cristina Negri, Michael Wang, May Wu, Seth Snyder, and Lorraine Lafreniere. "Biofuels, Land, and Water: A Systems Approach to Sustainability." *Environmental Science and Technology* 43 (2009): 6094–6100. doi:10.1021/es900801u.
- Godar, Javier, Toby Gardner, Jorge Tizado, and Pablo Pacheco. "Actor-specific Contributions to the Deforestation Slowdown in the Brazilian Amazon." *Proceedings of the National Academy of Sciences of the United States* 43 (2014). doi:10.1073/pnas.1509310112.
- Gomes Saraiva, Miriam. "Brazil's Strategies and Partnerships: The Place of the European Union." *Perspectives* 20, no. 2 (2012): 45–62.
- Government of Brazil. "Memorandum of Understanding between the Government of the Federative Republic of Brazil and the Government of the United States of America to Advance Cooperation on Biofuels." March 9, 2007. <http://kitplone.itamaraty.gov.br/sala-de-imprensa/notas-a-imprensa/2007/03/09/memorando-de-entendimento-entre-o-governo-da/print-nota>.
- Harvey, Mark, and Sarah Pilgrim. "The New Competition for Land: Food, Energy, and Climate Change." *Food Policy* 36 (2011): s40–s51.
- "Highlights from the Third Conference of the Parties to the United Nations Framework Convention on Climate Change: 5 December 1997." *Earth Negotiations Bulletin*, IISD, 1997. <http://www.iisd.ca/vol12/enb1272e.html>.
- Hilton, Stanley. "Las relaciones argentino-brasileña: el punto de vista de Brasil." In *Geopolítica y Política del Poder en el Atlántico Sur*, edited by Carlos Moneta, 27–42. Buenos Aires: Editorial Pleamar, 1983.
- International Centre for Trade and Sustainable Development. "Brasil y Unión Europea acuerdan Diálogo de la Energía." Geneva, Switzerland, July 10, 2007. <http://ictsd.org/i/news/puentesquincenal/9848/>.
- International Energy Agency. *World Energy Outlook 2010*. Paris: International Energy Agency. <http://www.worldenergyoutlook.org/media/weo2010.pdf>.
- Janssen, Rainer, and Dominik Damian Rutz. "Sustainability of Biofuels in Latin America: Risks and Opportunities." *Energy Policy* 39 (2011): 5717–5725. doi:10.1016/j.enpol.2011.01.047.
- Johnson, Ken. "Brazil and the Politics of the Climate Change Negotiations." *Journal of Environment & Development* 10, no. 2 (2001): 178–206. doi:10.1177/107049650101000204.
- Kelly, Philip. "Temas tradicionales de la geopolítica brasileña y el futuro de la geopolítica en el Cono Sur." In *Geopolítica del Cono Sur y la Antártida*, edited by Philip Kelly and Jack Child, 115–128. Buenos Aires: Editorial Pleamar, 1990.
- Klare, Michael. *Rising Powers, Shrinking Planet: The New Geopolitics of Energy – How Scarce Energy is creating a New World Order*. Oxford: One World Publications, 2008.
- Lafer, Celso. *La Identidad Internacional de Brasil*. Buenos Aires: Fondo de Cultura Económica, 2002.
- Legler, Thomas, and Arturo Santa-Cruz. "El patron contemporáneo del multilateralismo latinoamericano." In *Pensamiento Propio*, edited by Thomas Legler and Arturo Santa-Cruz, 11–34. Buenos Aires: Coordinadora Regional de Investigaciones Económicas y Sociales, 2011.
- Metz, Bert, Ogunlade Davidson, Peter Bosch, Rutu Dave, and Leo Meyer. "Climate Change 2007 – Mitigation of Climate Change: Contribution of Working Group III to the Fourth Assessment Report of



- the IPCC." Intergovernmental Panel on Climate Change, 2007. [www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4\\_wg3\\_full\\_report.pdf](http://www.ipcc.ch/pdf/assessment-report/ar4/wg3/ar4_wg3_full_report.pdf).
- Moniz Bandeira, and Luiz Alberto. *Presencia de Estados Unidos en Brasil: dos siglos de historia*. Buenos Aires: Editorial Corregidor, 2010.
- Ponte, Stefano, and Carsten Daugbjerg. "Biofuel Sustainability and the Formation of Transnational Hybrid Governance." *Environmental Politics* 24 (2015): 96–114.
- Renewable Energy Policy Network for the First Century (REN21). *Renewables 2014: Global Status Report*. 2014. [http://www.ren21.net/Portals/0/documents/Resources/GSR/2014/GSR2014\\_KeyFindings\\_low%20res.pdf](http://www.ren21.net/Portals/0/documents/Resources/GSR/2014/GSR2014_KeyFindings_low%20res.pdf).
- Robertson, G. Philip, Virginia H. Dale, Otto C. Doering, Steven P. Hamburg, Jerry M. Melillo, Michele M. Wander, William J. Parton, et al. "Sustainable Biofuels Redux." *Science*, no. 322 (2008): 49–50.
- Rojas Aravena, Francisco. "Rol y evaluación de la diplomacia de cumbres: construyendo el multilateralismo cooperativo." In *Multilateralismo: Perspectivas latinoamericanas*, edited by Francisco Rojas Aravena, 13–54. Caracas: Nuevas Sociedad/FLACSO Chile, 2000.
- Reis da Silva, André. "The Matrix Changes of Current Brazilian Foreign Policy (2000–2010)." *Meridiano* 47 (2010): 18–24.
- Rosales, Osvaldo, and Mikio Kuwayama. *China y América Latina y el Caribe: hacia una relación económica y comercial estratégica*. Santiago de Chile: CEPAL, 2015. <http://www.cepal.org/es/publicaciones/2598-china-y-america-latina-y-el-caribe-hacia-una-relacion-economica-y-comercial>.
- Solomon, Barry, and Bailis, Robert. "Introduction." In *Sustainable Development of Biofuels in Latin America and the Caribbean*, edited by B. Solomon and R. Bailis, 1–26. New York: Springer, 2014.
- Sorda, Giovanni, Martin Banse, and Claudia Kemfert. "An Overview of Biofuel Policies across the World." *Energy Policy* 38 (2010): 6977–6988. doi:10.1016/j.enpol.2010.06.066.
- Sovacool, Benjamin. "What are we Doing Here? Analyzing Fifteen Years of Energy Scholarship and Proposing a Social Science Research Agenda." *Energy Research & Social Science* 1 (2014): 1–29. doi:10.1016/j.erss.2014.02.003.
- Soreanu Pecequilo, Cristina. "A New Strategic Dialogue: Brazil–US Relations in Lula's Presidency (2003–2010)." *Revista Brasileira de Política Internacional* 53 (special issue) (2010): 132–150. doi: 10.1590/S0034-73292010000300008.
- Stattman, Sarah, and Aarti Gupta. "Negotiating Authority in Global Biofuel Governance: Brazil and the EU in the WTO." *Global Environmental Politics* 15 (2015): 41–59. doi:10.1162/GLEP\_a\_00271.
- Travassos, Mario. *Proyección Continental del Brasil*. Buenos Aires: Círculo Militar, 1941.
- União da Indústria de Cana-de-Açúcar. "Embaixadas brasileiras querem intensificar negocios com etanol de cana na Europa." April 1, 2010. <http://www.unica.com.br/noticia/445336092036979688/embaxadas-brasileiras-querem-intensificar-negocios-com-etanol-de-cana-na-europa/>.
- União da Indústria de Cana-de-Açúcar. "Looking Back: Parting Thoughts from Joel Velasco." July 1, 2011. <http://www.unica.com.br/interviews/17830428920337549416/looking-back-por-cento3A-parting-thoughts-from-joel-velasco/>.
- União da Indústria de Cana-de-Açúcar. "Unica defende fim da tarifa contra etanol em reunião com Subsecretário de Energia dos EUA." August 7, 2008. <http://www.unica.com.br/noticia/37593889920335416218/unica-defende-fim-da-tarifa-contra-etanol-em-reuniao-com-subsecretario-de-energia-dos-eua/>.
- United Nations Framework Convention on Climate Change (UNFCCC). "Appendix II – Nationally Appropriate Mitigation Actions of Developing Country Parties." 2010. [http://unfccc.int/meetings/cop\\_15/copenhagen\\_accord/items/5265.php](http://unfccc.int/meetings/cop_15/copenhagen_accord/items/5265.php).
- UNFCCC. "Clean Development Mechanism." In *Executive Board Annual Report 2013*. 2013. [http://unfccc.int/resource/docs/publications/pub\\_cdm\\_eb\\_annualreport\\_2013.pdf](http://unfccc.int/resource/docs/publications/pub_cdm_eb_annualreport_2013.pdf).
- van Dam, J., M. Junginger, and A. Faaij. "From the Global Efforts on Certification of Bioenergy towards an Integrated Approach based on Sustainable Land Use Planning." *Renewable and Sustainable Energy Reviews* 14 (2010): 2445–2472. doi:10.1016/j.rser.2010.07.010.
- Verburg, René, Saulo Rodríguez Filho, Diego Lindoso, Nathan Debortoli, Gabriela Litre, and Marcel Bursztyn. "The Impact of Commodity Price and Conservation Policy Scenarios on Deforestation." *Land Use Policy* 37 (2014): 14–26. doi:10.1016/j.landusepol.2012.10.003.